

Combat Search and Rescue



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SUMMARY OF REVISIONS

This change refines discussion of dedicated Air Force rescue assets (pages 9-10); refines discussion of combat search and rescue task force elements (pages 12-16); clarifies command and control relationships for Air Force special operations forces and special tactics teams involved in CSAR (page 16); eliminates discussion of high, medium, and low threat environments while adding discussion of nominal and increased threat risk environments (page 18); adds discussion of launching from an alert posture or deliberately planning a mission (page 20); adds discussion of pararescue support to isolated personnel (page 21); improves organization of chapter five (pages 23-26); adds discussion of the isolated person's impact on the CSAR mission (page 27-28); and eliminates the volume summary at the end of the document.

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FOREWORD



Combat search and rescue (CSAR) preserves critical combat resources while denying the enemy a potential intelligence source. It is a key element in sustaining the morale, cohesion, and, ultimately, the operational performance of friendly forces. Successful CSAR enhances the joint force commander's (JFC's) combat capability by returning personnel to areas under friendly control and denying adversaries the opportunity to exploit the intelligence and propaganda value of captured personnel. The Air Force organizes, trains, and equips personnel to conduct CSAR and search and rescue (SAR) operations across the range of military operations.

The Air Force has a rich history in CSAR operations dating back to World War II. Air Force combat rescue philosophy is based on maintaining a capability to recover combat aircrews and other isolated personnel from hostile or denied areas. This philosophy assumes rescue forces are placed at risk to recover personnel. Though risk is inherent in CSAR operations, CSAR forces employ specially configured platforms designed to operate in hostile or denied environments as well as specialized tactics to minimize vulnerability to threats. Whether operating alone or in a large package, CSAR assets represent a specialized application of aerospace power integral to US combat operations.

AFDD 2-1.6, *Combat Search and Rescue*, establishes operational doctrine for Air Force CSAR operations and outlines the principles and procedures which guide Air Force CSAR organization, command and control, force composition, planning, and employment.

Lance L. Smith
Major General, USAF
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15 July 2000

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INTRODUCTION

Those who are possessed of a definitive body of doctrine and of deeply rooted convictions upon it will be in a much better position to deal with the shifts and surprises of daily affairs than those who are merely taking short views....

Winston Churchill

PURPOSE

Air Force Doctrine Document (AFDD) 2-1.6, *Combat Search and Rescue*, contains the operational-level Air Force views on combat search and rescue operations. It supports basic aerospace power doctrine contained in AFDD 1, *Air Force Basic Doctrine*, and basic air warfare doctrine contained in AFDD 2-1, *Air Warfare*. It supersedes AFDD 2-1.6 dated 30 September 1998.

APPLICATION

This AFDD applies to all Air Force military and civilian personnel (includes Air Force Reserve Command [AFRC] and Air National Guard [ANG] units and members). The doctrine in this document is authoritative but not directive; as such, this doctrine will be followed except when, in the judgment of the commander, exceptional circumstances dictate otherwise. Therefore, commanders need to consider not only the contents of this AFDD, but also the particular situation when accomplishing their missions.

SCOPE

This document establishes the roles and responsibilities of Air Force personnel supporting CSAR operations and outlines the principles for planning and executing CSAR operations supporting theater campaign objectives. It describes the mission, command relationships, force composition, and planning considerations necessary to conduct operations. It also discusses the relationship between the Air Force component and joint CSAR organizations and discusses the role of the Commander, Air Force Forces (COMAFFOR), as well as CSAR organization, responsibilities, capabilities, and procedures.

CHAPTER ONE

OVERVIEW

Preserving the life and well-being of our Service members and civilians who are placed in harm's way while defending our Nation's interests is, and must remain one of our highest priorities.

William J. Perry, Secretary of Defense (SecDef)
SecDef Memorandum, 26 January 1996

GENERAL

Air Force CSAR is a specific task performed by rescue forces to recover isolated personnel during major theater war or military operations other than war (MOOTW). Accomplished with a mix of dedicated and augmenting assets, CSAR is an element of personnel recovery (PR). PR is the umbrella term for operations focusing on recovering captured, missing, or isolated personnel from danger. The Air Force organizes, trains, and equips personnel to conduct CSAR operations, using the fastest and most effective means, across the range of military operations. *Downed aircrew are the most likely personnel to require a US Air Force CSAR effort during military operations; therefore, Air Force CSAR doctrine focuses on this type of operation.*

JFCs, who may be commanders in chief (CINCs), subunified commanders, or joint task force (JTF) commanders, normally delegate the responsibility to recover isolated personnel to joint force component commanders. **Component commanders of a joint force have primary authority and responsibility to plan and conduct CSAR in support of their own operations.** The COMAFFOR should establish a rescue coordination center (RCC) to coordinate Air Force CSAR activities, including coordination with the joint search and rescue center (JSRC) and other component RCCs, as appropriate. *The Air Force component RCC should normally be collocated with the aerospace operations center (AOC) to optimize integration and be manned with personnel specifically trained to coordinate CSAR operations.* CSAR organizational requirements may vary between theaters due to operational requirements and procedures.



Lt Devon Jones being rescued after his F-14 was shot down over Iraq.

By direction of the Chairman of the Joint Chiefs of Staff, **theater combatant commanders should establish a standing JSRC or functional equivalent.** They normally maintain a capability to coordinate and control theater rescue efforts by designating one of the established component commanders responsible to manage and control joint CSAR operations. This component commander should be designated the supported commander for joint CSAR.

AIR FORCE CSAR HISTORY

The Air Force has a rich history in CSAR operations dating back to the Army Air Force (AAF) period of World War II. Heavy combat losses in the European Theater prompted AAF leaders to join

efforts with the Royal Air Force Air-Sea Rescue Organization in demonstrating the first United States (US) aviation rescue capability. In the Pacific Theater, each unit developed its own rescue capability to meet unique requirements. By 1946, the Army Air Force had consolidated search and rescue operations and training under the Air Rescue Service (ARS). The ARS was redesignated as the Aerospace Rescue and Recovery Service (ARRS) in 1964. During the Vietnam conflict, the ARRS was the most effective combat aircrew recovery force ever, rescuing over 3,800 personnel. After Vietnam, the ARRS established the Air Force RCC to coordinate inland SAR in the continental US and began providing missile site support to Strategic Air Command and logistic support to remote Air Force sites. In 1983, ARRS was merged with Air Force special operations forces to form the 23d Air Force under Military Airlift Command (MAC). In 1989, Headquarters Air Rescue Service was activated under MAC to rebuild a dedicated combat rescue capability. In 1993, ARS was inactivated and the air rescue forces were transferred to the Combat Air Forces (CAF).



Personnel and machine—following first helicopter rescue, Burma, 1944.

MISSIONS

Air Force combat rescue forces deploy to conduct CSAR with dedicated rotary- and fixed-wing aircraft, specially trained aircrews, and support personnel in response to geographic combatant commander (theater CINC) taskings. **The primary mission of Air Force CSAR is to recover isolated personnel, with the heaviest emphasis on recovering downed aircrew.** Basic aircraft and aircrew qualification permits aircrews to conduct rescue operations during MOOTW. *As a result of these qualifications, rescue forces may also conduct collateral missions such as civil SAR, emergency aeromedical evacuation, humanitarian relief, international aid, noncombatant evacuation operations, counterdrug activities, support for National Aeronautics and Space Administration flight operations, and other missions as directed by the CINC and COMAFFOR.*

CSAR PHILOSOPHY AND BENEFITS

Air Force combat rescue philosophy is based on maintaining a capability to recover combat aircrews and other isolated personnel. This philosophy assumes these forces will be prepared to recover personnel where needed and that they, like other combat forces, will be placed at risk.

Successful Air Force CSAR enhances the JFC's combat capability in three ways:

- ✧ *CSAR operations return key personnel to friendly control*, allowing them to fight again.
- ✧ CSAR operations often influence the course of national and international politics by *denying adversaries the opportunity to exploit the intelligence and propaganda value of captured personnel*.
- ✧ The presence of a robust and viable CSAR force *increases morale, with a resultant increase in operational performance*.

CSAR in the Korean War

Certainly what must rank as one of the more bizarre rescues of the Korean War—it involved bridges, horsemen, and a bullet-riddled pickup on ice—happened to Marine Major David Cleeland. On his one hundred and first aerial mission Cleeland had just blown up a bridge when he took a hit in his Corsair and crashed on a thick cap of ice. Chinese Reds poured rifle fire at him, but he took refuge under his plane's wreckage. Finally they sent a Communist soldier after him—on horseback! Cleeland shot the man and then waited until a rescue “helo” could get to the scene. As the craft hovered, forty-eight-year-old Airman Second Class Thomas C. (Pop) Thornton stretched out his right hand to meet Cleeland's and pull him aboard. A Red bullet smashed Pop's hand. Half crazed from the searing pain, he still had the presence of mind, and the ingrained dedication to helping his fellow man, to reach out with his other hand and haul the Marine pilot in. The Sikorsky's right wheel was shot away as it lifted off, its gas tank was hit, and the tail rotor was damaged, but the pickup was carried out, and everyone made it back to safety.

L. B. Taylor, Jr.

That Others May Live, The Aerospace Rescue and Recovery Service

CHAPTER TWO

ORGANIZATION AND COMMAND AND CONTROL

Order or disorder depends on organization.

Sun Tzu

GENERAL

Air Force combat rescue forces and coordination responsibilities are assigned to CAF major commands (MAJCOMs)—Air Combat Command (ACC), Pacific Air Forces, and United States Air Forces in Europe. During contingencies, these relationships change according to the particular operational plan (OPLAN) or tasking being executed. Rescue forces from the air reserve components are assigned to AFRC and the ANG, respectively, until mobilization. Upon mobilization, AFRC/ANG forces are normally attached to the appropriate CAF MAJCOM until a change of operational control to the employing commander occurs.

ACC is the Air Force lead agent for CSAR. The Commander, Air Combat Command (COMACC) exercises authority over all active duty US Air Force continental United States rescue forces. *This authority includes responsibility for organizing, training, equipping, and administering assigned forces, and providing these forces to the geographic combatant commanders.* COMACC exercises this authority through subordinate numbered air force (NAF) and unit commanders. Theater CAF commanders exercise authority over all active duty overseas rescue forces assigned to their theaters through respective NAF and subordinate commanders.

COMBAT RESCUE FORCES COMMAND AUTHORITY

Normally, JFCs assign the appropriate level of authority over forces to the supported commander for joint CSAR in accordance with the guidelines in JP 0-2, *Unified Action Armed Forces* (UNAAF). **If designated as the supported CSAR commander, the COMAFFOR or Air Force officer serving as joint force air component commander (JFACC) will normally exercise operational control (OPCON) over Air Force CSAR forces and tactical control (TACON) over other forces involved in a joint CSAR operation.**

Unity of effort is critical to CSAR operations. Effective CSAR is most likely when a single commander has the authority to direct all force employment in pursuit of the common objective—returning isolated personnel quickly while minimizing risk to rescue forces.

JOINT FORCE COMMANDERS

According to JP 3-50.2, JFCs have the primary authority and responsibility for CSAR in support of US forces within their assigned joint operations area, including civilian personnel, such as Civil Reserve Air Fleet crew members and deployed technical representatives. Therefore, *JFCs should establish a standing JSRC to plan, coordinate, and task components to support CSAR operations, review theater plans, and coordinate training and exercises.* During planning and execution, JFCs should ensure appropriate host-nation policies, laws, regulations, and capabilities are taken into consideration. JFCs should also ensure joint force component commanders support CSAR operations of the other components, to the maximum extent possible.

JOINT FORCE AIR COMPONENT COMMANDER

Unity of effort through centralized control of theater air assets is the most effective way to employ airpower. **The JFACC provides a JFC the means to exploit the capabilities of air and space power through theater air operations.** *The JFACC should be the component commander with the preponderance of aerospace assets and the capability to plan, task, and control joint aerospace operations.* The JFACC's responsibilities and command authority assigned by the JFC include planning, coordinating, recommending apportionment, and tasking based on the JFC's apportionment decision. Using the JFC's guidance and authority in coordination with other commanders, the JFACC recommends to the JFC apportionment of air sorties or priorities to various missions or geographic areas.

The supported commander for joint CSAR should be the commander with the preponderance of dedicated CSAR forces and the command and control (C2) capability to control them. This commander should have overall responsibility and authority for planning, coordinating, and controlling joint SAR and CSAR operations within the geographical area assigned to the joint force, using those assets made available by the joint force. If the JFACC is designated as the supported commander for joint CSAR, the JFACC recommendation would include sorties required to conduct planned or projected CSAR operations.

COMMANDER, AIR FORCE FORCES

The COMAFFOR, as delegated by the JFC, has the authority and responsibility to plan and conduct Air Force CSAR in support of geographic combatant commander war plans. *The planning of such operations should take into account the availability and capability of other components of the joint force, to include the United States Coast Guard and multinational forces, if available.* The Air Force has traditionally been tasked to conduct the CSAR mission in support of theater joint air requirements. The Air Force organizes, trains, equips, and provides a dedicated CSAR force, which includes aircraft, aircrews, pararescue, and support personnel. The Air Force also has an established C2 mechanism, normally within the AOC to support CSAR operations. COMAFFOR responsibilities relating to CSAR normally include:

- ✧ Preparing rescue concept of operations, plans, or annexes to theater OPLANs or directives.
- ✧ Exercising OPCON of assigned and attached Air Force rescue forces.
- ✧ Establishing an RCC or CSAR office of primary responsibility with clearly defined responsibilities.
- ✧ Providing the JSRC with Air Force component capabilities, limitations, and standard operating procedures for dissemination to other components, as appropriate.
- ✧ Providing mutual support to other Service's rescue operations as directed by the JFC.
- ✧ Providing command and theater-specific rescue tactics, planning, and intelligence data to subordinate commands and gained units.
- ✧ Ensuring all Air Force personnel committed to a hostile environment are familiar with tactics employed by rescue forces during recovery operations.
- ✧ Ensuring intelligence data to support planning and training for evasion and recovery is available and disseminated to all personnel who have the potential of becoming isolated.

JOINT SEARCH AND RESCUE CENTER

The joint search and rescue center plans, coordinates, and tasks components to support CSAR missions, coordinates CSAR procedure published in the special instructions (SPINS), reviews theater plans, and coordinates training and exercises. Since CSAR is inherently joint and transcends component functional responsibilities and organizational boundaries, the JSRC should be staffed appropriately by each component to coordinate joint rescue requirements. Though staffed suitably by each component, *the primary responsibilities of JSRC controllers are to coordinate CSAR operations between component RCCs, prevent duplication of CSAR efforts, and facilitate the efficient exchange of information.* CSAR support is based on real-time operations and requires extensive coordination with other joint air assets and support functions. If the JFACC is designated the supported commander for joint CSAR, the JSRC should be fully integrated into the JFACC's joint air operations center (JAOC).

RESCUE COORDINATION CENTER

The COMAFFOR should establish an RCC integrated with the AOC to coordinate Air Force CSAR activities. If the COMAFFOR does not establish an RCC, these responsibilities should be delegated to a functional equivalent. In either case, a trained search and rescue mission controller is responsible for coordinating Air Force CSAR forces. *When the COMAFFOR is designated the JFACC, and supported commander for joint CSAR, the Air Force RCC may form the nucleus for the JSRC.*

CHAPTER THREE

AIR FORCE CSAR ELEMENTS

The distinctive character of imprisonment in a North Vietnam prison camp was the suffocating monotony ... the pervasive sameness of the routine, over and over, day in and day out.

**Brigadier General Robinson Risner,
prisoner of war for over seven years**

RESCUE COORDINATION CENTER

The Air Force component's RCC is the hub of Air Force rescue activities. *When the COMAFFOR directs CSAR support he will notify the RCC which initially assumes duties as the CSAR mission coordinator.* RCC controller duties include the following:

- ✧ Initiating CSAR planning.
- ✧ Maintaining real time intelligence information on systems posing threats to CSAR activities.
- ✧ Designating isolated personnel reports (ISOPREP) control points.
- ✧ Obtaining ISOPREP data and evasion plans of action (EPAs) from units.
- ✧ Coordinating tasking among Air Force CSAR-capable forces.
- ✧ Informing the JSRC if Air Force forces are capable of executing the mission.
- ✧ Requesting additional recovery forces through the JSRC if Air Force CSAR forces are unable to execute the CSAR mission single-Service.
- ✧ Coordinating CSAR activities with the JSRC, supporting agencies, and the requesting unit.
- ✧ Distributing SAR SPINS to subordinate units.

The RCC is also responsible for reviewing and developing CSAR and evasion and recovery appendices to Annex C (Operations) for Air Force supporting OPLANs, concept plans, and operational orders.

CHIEF, RESCUE COORDINATION CENTER

The COMAFFOR directs Air Force CSAR operations through the chief of the RCC. *The chief of the Air Force RCC is responsible for the day-to-day operations of the RCC.* If the COMAFFOR is designated the JFACC and responsible for joint CSAR operations, the chief of the RCC will normally be designated the JSRC director. Additionally, that person will still be responsible for Air Force RCC operations.

SEARCH AND RESCUE DUTY OFFICER

The search and rescue duty officer (SARDO), who should be collocated with the AOC and normally works in the combat operations division, coordinates real-time support for CSAR operations. Dedicated search and rescue forces normally need support from other forces to conduct a

rescue; the SARDO lines up that support, through the AOC, from ongoing operations or from forces on ready alert. Assets that might be pulled from ongoing operations include forward air controller (FAC), close air support (CAS), and combat air patrol (CAP). TACON of these assets may be transferred to the airborne mission commander (AMC) or the on-scene commander (OSC).

UNIT COMMANDERS

Because of the inherent risk in combat operations, unit commanders should:

- ✧ Ensure assigned personnel are familiar with this AFDD as well as joint CSAR doctrine and joint tactics, techniques, and procedures, and Air Force rescue concepts and procedures.
- ✧ Train their personnel in reporting requirements when overflying areas where isolated personnel are known or suspected to be located.
- ✧ Ensure ISOPREPs and individual/unit EPAs are properly prepared, classified, current, and readily available.
- ✧ Ensure their personnel are knowledgeable of SAR SPINS and procedures.

ISOLATED PERSONNEL

The actions of the isolated individual are critical to the rescue process. **Isolated personnel can best prepare themselves to assist rescue efforts by:**

- ✧ Completing and periodically **reviewing their ISOPREPs**.
- ✧ Developing, reviewing, and **updating EPAs**, as required.
- ✧ Thoroughly **understanding notification and authentication** requirements.
- ✧ Being intimately **familiar with survival and evasion equipment and techniques**. *The importance of good communications with rescue forces cannot be overstressed.*
- ✧ Being **familiar with search and rescue concepts of operations and procedures** to assist CSAR forces to the maximum extent.
- ✧ Remaining **mentally and physically prepared** to survive and evade for indefinite periods.

DEDICATED AIR FORCE RESCUE RESOURCES

The Air Force maintains rotary-wing aircraft dedicated to personnel recovery operations in denied or hostile environments. Specially equipped C-130 tanker-capable combat rescue aircraft are also maintained as dedicated CSAR assets. These combat configured helicopters and fixed-wing aircraft operate where low observability is required using low-level navigation and threat avoidance procedures, onboard electronic defensive systems and countermeasures dispensers, various forward-looking infrared and radar systems, and night vision devices. *Individual pararescue specialists (PJs) provide the critical link between rescue platforms and the isolated personnel.* When rescue assets cannot avoid the threat on their own, escort and CAP aircraft should be employed to suppress, degrade, or destroy the threat, thereby permitting the CSAR operation to proceed. A carefully tailored combat search and rescue

One Isolated Person: Bat 21

As the flight continued its right turn to depart the target area, another site began tracking the aircraft. It was located northwest, just above the [demilitarized zone] DMZ. Bat 21 was between the site and the bombers, and was level at twenty-nine thousand feet. The site launched three missiles at the formation. One of the [electronic warfare officers] EWOs on Bat 21 electronically observed the site as it began tracking his aircraft, and he detected the [surface-to-air missile] SAM missile launches. He called a warning to the flight. For self-protection, the crew of Bat 21 began electronic jamming and the pilot initiated a right jink turn into the missile. The EWO then called, "No, no, move left, move left!" and the pilot tried to reverse his turn. It was too late. The missile smashed into the middle underside of the aircraft, and the resulting explosion enveloped it in a massive ball of fire. The other aircraft escaped the barrage of missiles.

Lt Col Iceal Hambleton, the navigator of Bat 21, was seated just behind the pilot—the EB-66 did not have a position for a copilot. The missile hit right below Hambleton's seat and knocked out the intercom system. As the aircraft began to drop out of control, the pilot gave Hambleton a hand signal to eject. Hambleton squeezed the ejection handles and rocketed away from the aircraft. As he rose in his ejection seat, he looked down and saw the pilot looking up at him. A few seconds later, he heard another loud explosion. It occurred to him later that either the aircraft had exploded or it had been hit by a second missile. ...Bat 21 Bravo descended with pieces of the aircraft falling around him.

Darrel D. Whitcomb
The Rescue of Bat 21

task force (CSARTF) or package can significantly enhance successful CSAR operations. The size and complexity of the package depends on the mission requirements and the threat.

Recovery Vehicles

Combat rescue helicopters are the primary and preferred recovery vehicles for the United States Air Force. *They can be used theater wide for long range, low level, day/night marginal weather operations into hostile environments to recover distressed or isolated personnel.* Missions are predominantly flown in two-ship elements, but may be flown single-ship, multiship, or as part of a large composite force package. CSAR mission planning, composite force tactics, unit-level tactics training, and operational employment should be focused on fully exploiting the unique capabilities of the rescue helicopters and the composite rescue force. From a designated point in close proximity to the pickup zone, the recovery vehicle formation lead or aircraft commander will normally be the individual ultimately responsible for continuing the mission.

Fixed-wing Rescue Assets

Fixed-wing tanker-capable rescue assets are a key element of CSAR operations and play a critical role in extending the operational range of air refuelable helicopters.

If the isolated personnel's location is beyond the range of the recovery helicopter, the tanker will provide in-flight refueling of the helicopter(s). While in-flight refueling operations in a permissive environment are highly desirable, the depth of the battlespace and isolated personnel's location may require that helicopter refueling be conducted in a contested or sensitive environment. These assets are also capable of airdropping PJs and/or equipment to assist isolated personnel. Additionally, fixed-wing rescue aircraft



HC-130P tanker-capable rescue aircraft are critical to rescue efforts.

have an expanded communications capability, and they can be used to transport rescued survivors over longer distances. These capabilities may increase the effectiveness and flexibility of a CSARTF.

Individual Pararescue Specialists

Individual pararescue specialists (PJs) function as rescue and recovery experts on flying status or as surface elements. They are the essential air/surface link in PR. *PJs offer expertise in PR and CSAR planning, in CSAR SPINS development, and as liaison for theater JSRC or component RCC functions.* They provide a rapid response capability and the ability to conduct day and night operations in denied/sensitive areas in mountain, desert, arctic, urban, jungle, and water environments. PJs assist in and perform survival, evasion, resistance, and escape (SERE) and security. They also provide advanced trauma life support and field medical care. They move personnel and material to safety or friendly control when direct recovery by aircraft is not possible. PJ teams are tailored for the specific mission, with the smallest deployable increment being a two-man team. PJs may operate from rotary- or fixed-wing aircraft by landing, by using alternate insertion and extraction methods (hoist, fast rope, and rappel), or by parachuting (static line or freefall). Additionally, they may use deployable watercraft or tactical vehicles.

COMBAT SEARCH AND RESCUE TASK FORCE

The primary objective of the CSARTF is the successful recovery of isolated personnel without further loss of friendly assets. *A CSARTF is developed by the RCC or JSRC to defeat or degrade the threat to an acceptable level of risk during the execution phase of the CSAR mission. A CSARTF is a mutually supporting package of assets tailored to meet a specific CSAR requirement. The CSARTF was used extensively and effectively during the Vietnam conflict, and on a limited basis during the Gulf War. Their use also resulted in two successful recoveries of downed airmen during the Air War over Serbia.*

Although rescue assets may operate autonomously, **CSAR capabilities and mission outcomes can be significantly enhanced by employing carefully tailored CSARTFs.** The additional assets in a CSARTF provide a variety of services and capabilities to include: command, control, and communications; determination of expected enemy threat levels; location and authentication of isolated personnel; protection of isolated personnel and task force elements from both air and ground attacks; navigation assistance; armed escort; CAP; and air refueling support. *The exact composition of the CSARTF varies with the threats en route to, from, and in the vicinity of the isolated personnel. It can range from a single- or two-ship helicopter operation to more than fifty different aircraft working in concert. All airborne aircraft should be prepared to be re-roled to assist rescue operations.*

The CSARTF is complex because of the varied forces integrated in a threat environment and due to the inherently dynamic nature of CSAR operations. *Because of this complexity, C2 arrangements and responsibilities must be clearly specified by the RCC or JSRC in the CSAR SPINS and standing operating procedures (SOPs) to ensure synergetic effort. When possible the CSARTF will need to be identified in the air tasking order (ATO) and will need to participate in detailed planning/training to ensure seamless integration, facilitate C2 and successful mission execution.* CSARTFs consist of any or all of the following elements:

Possible CSARTF Elements

- ✧ Dedicated Air Force Rescue Resources
- ✧ Airborne Mission Commander
- ✧ Rescue Escort
- ✧ On-scene Commander
- ✧ Rescue Combat Air Patrol
- ✧ Forward Air Controller
- ✧ Air Refueling Aircraft
- ✧ Intelligence, Surveillance, and Reconnaissance Platforms
- ✧ Air Force Special Operations Forces
- ✧ Special Tactics Teams

Airborne Mission Commander

An AMC coordinates and controls the flying mission for forces designated to support a specific CSAR operation. The AMC may be designated by component RCCs or higher authority to coordinate the efforts of several assets. *The AMC serves as an airborne extension of the RCC/JSRC and if required, designates the OSC.* The E-3 Airborne Warning and Control System (AWACS), though highly tasked, is the most capable AMC platform due to its extensive communications capability and ability to oversee the air picture. The EC-130E airborne battlefield command and control center (ABCCC) is also well suited to this role. Other multicrewed assets such as the Navy E-2 Hawkeye, and the E-8 joint surveillance, target attack radar system (JSTARS) are also good AMC platforms.

AMC responsibilities include:

- ✧ Determining the isolated person(s) location.
- ✧ Appointing an OSC pending arrival of dedicated OSC aircraft.
- ✧ Coordinating appropriate no-fire zones in the terminal area.
- ✧ Coordinating the establishment of CSAR communications nets.
- ✧ Managing the flow of aircraft to and from the objective area.
- ✧ Coordinating air refueling for CSARTF assets.
- ✧ Relaying isolated personnel intelligence and authentication data to other C2 agencies and CSARTF elements.
- ✧ Updating the RCC/JSRC of CSAR mission progress and support requirements.
- ✧ Providing timely situation updates to the CSARTF.

Rescue Escort

Dedicated rescue escort (RESCORT) should be available for the CSAR mission. RESCORT aircrews who are trained in search procedures, isolated personnel location and authentication procedures, and helicopter escort operations can significantly increase the chances of successful recovery of isolated personnel, particularly in increased threat environments. RESCORT formations must be proficient in CSARTF rendezvous procedures; escort tactics at high, medium, and low altitude; and defense of the CSARTF during mission execution.

SANDY is the usual call sign of a dedicated OSC/RESCORT aircrew specifically trained and qualified in CSAR tactics and techniques. *Ideally, RESCORT aircraft should be tactical aircraft capable of operating within altitude and endurance regimes similar to that of the recovery vehicles.* RESCORT aircraft also provide navigation assistance, armed escort, and assist in locating and authenticating isolated personnel. While *SANDY qualified A-10 aircrews are desired for RESCORT*, F-16 and F-15E aircraft have also been successfully employed. RESCORT aircraft normally carry ordnance effective in CSAR operations, such as rockets, cluster bomb units, and onboard cannon. *When able, RESCORT aircraft should coordinate with other CAS and strike assets to suppress any threats and save their ordnance for the execution phase of the CSAR—the final movement to and pickup of the isolated personnel.*

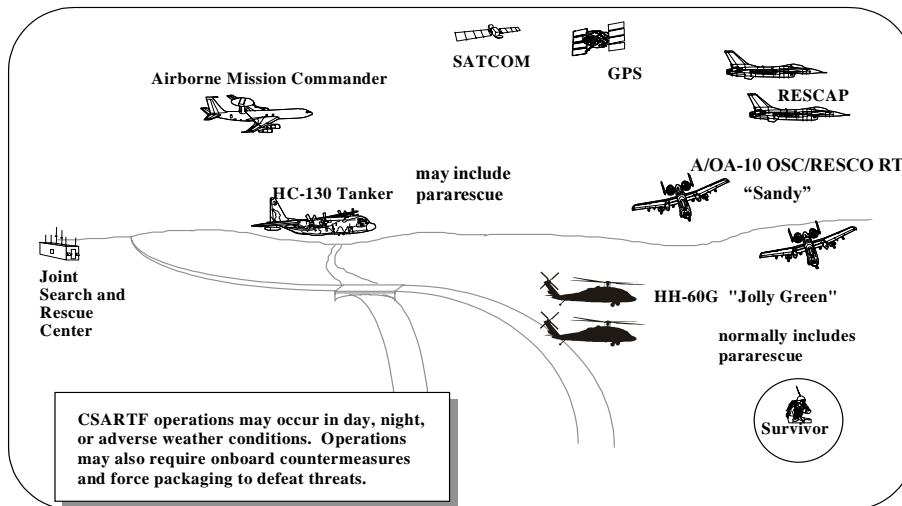


Figure 3.1. Notional CSARTF Operation

On-scene Commander

The OSC is the individual designated to control rescue efforts in the objective area. SANDY is the usual call sign of a dedicated OSC/RESCORT aircrew specifically trained and qualified in CSAR tactics and techniques. However, initially the OSC may be the downed aircrew's wingman or any other tactical aircraft in the vicinity. *Normally, the lead SANDY aircraft becomes the OSC upon arrival.* The OSC role may be transferred to the lead recovery vehicle if other specialized CSAR support is not available. Transfer of the OSC role should be clear to all for a successful CSAR mission. The OSC helps ensure effective asset management in the often chaotic and hostile objective area.

The OSC's initial actions are to establish communications with, locate, and authenticate the downed aircrew. Once communications have been established with the isolated personnel, the OSC should continue to monitor the isolated personnel's rescue frequency in case immediate actions are required to prevent their capture. Communications should be minimized in order to decrease an adversary's opportunity to locate the isolated personnel through their radio transmissions. The AMC will designate other aircraft to assume OSC duties, as necessary, to relieve the initial OSC. *The OSC has final CSAR execution authority.* If available, a SANDY qualified aircrew, a forward air controller (airborne) (FAC(A)), or a multicrew/multiradio aircraft should be designated as the OSC. The AMC can simultaneously act as OSC if deemed necessary, or to avoid multiple OSC turnovers.

Rescue Combat Air Patrol

Rescue Combat Air Patrol (RESCAP) aircraft are air superiority assets assigned to protect the CSARTF from airborne threats while en route to and from the objective. RESCAP aircraft maintain situational awareness of the progress of the CSARTF and engage hostile fixed- or rotary-wing aircraft attempting to disrupt the recovery operation. Once established, RESCAP aircraft also maintain patrol over the objective area. RESCAP aircraft may also assist RESCORT aircraft in locating and authenticating isolated personnel.

Forward Air Controller

A FAC or FAC(A) provides a CSARTF several significant advantages. **A FAC may be able to locate and authenticate the isolated personnel before the arrival of other elements of the CSARTF and normally is the OSC until the CSARTF arrives.** The FAC may also provide a current and accurate assessment of enemy activity in and around the objective area.

Air Refueling Aircraft

CSAR operations, by their very nature, occur at unexpected times and locations. As a result, additional aircraft may be airborne and additional air refueling may be required. To aid a fellow airman, aircraft historically remain on station longer than planned, and often require additional fuel. RCC/AOC/AMC personnel should be prepared to push additional air refueling aircraft to support CSAR operations.

Refueling of both fixed- and rotary-wing aircraft may be required during CSAR operations. Tankers will often be moved forward to facilitate quicker CSARTF refueling operations. Sequencing of assets between refueling and marshalling points should be carefully managed in order to have all CSARTF elements available at mission execution time.

Intelligence, Surveillance, and Reconnaissance Platforms

Intelligence, surveillance, and reconnaissance (ISR) platforms, whether aircraft- or space-based, possess a tremendous capability for supporting CSAR efforts, especially for receiving communication from the isolated personnel and monitoring threat systems in the objective area. The AMC should use ISR capabilities, when available, to collect and update the CSARTF with information from the isolated personnel. Time permitting, information should normally flow to the AMC prior to dissemination to the entire CSARTF. These assets are also suited to maintaining a listening watch on isolated personnel frequencies when an immediate pickup is not possible. The AMC should consider requesting movement of ISR aircraft to optimize their ability to receive information related to the CSAR.

Air Force Special Operations Forces

Certain Air Force special operations forces (AFSOF), including aircraft and special tactics teams (STTs) are effective in CSAR operations. *They conduct regular training with the conventional Air Force assets in order to support Air Force CSAR requirements as an integrated component of the larger CSARTF.* AFSOF assets support CSAR in either a conventional CSAR role, or as part of a joint special operations task force (JSOTF), executing both CSAR and SOF missions in support of the overall campaign as directed by the theater commander.

When AFSOF forces deploy in support of both CSAR and special operations missions they will normally remain under the OPCON of the joint force special operations component commander (JFSOCC)/commander, joint special operations task force (COMJSOTF), with TACON to the JFACC for CSAR missions.

When employed in a conventional CSAR role, AFSOF assets tasked for CSAR should be identified separately from AFSOF assets required for special operations missions. *Those forces solely dedicated to support Air Force CSAR requirements may be under OPCON of the COMAFFOR, along with*

the other Air Force CSARTF elements unless other command relationships are coordinated in advance between the JFACC and the JFSOCC.

Special Tactics Teams

STTs are airborne capable ground combat forces assigned to Air Force Special Operations Command. They are composed of combat controllers and PJs specifically organized, trained, and equipped to facilitate and expedite the utilization of aviation assets and provide special operations expertise.

STTs provide PR/CSAR planning expertise; facilitate contact, authentication, and mechanical extrication; provide medical treatment at the paramedic level; and facilitate movement and exfiltration for the recovery of personnel. This may include unconventional assisted recoveries involving selected area for evasion (SAFE) servicing and hand-over operations. If required, STTs may provide C2, ground-to-air and point-to-point communications, air traffic control, terminal attack control, and artillery call for fire in the objective area.

If responsibility for CSAR is assigned to the air component, special tactics personnel required to conduct CSAR operations should normally follow the same command relationships established for the forces they will be supporting to facilitate C2 during rescue operations. The AFDD on special operations contains additional information governing employment of Air Force special operations forces.



Typical Air Force Elements of a CSARTF

CHAPTER FOUR

CONCEPT OF OPERATIONS

A captured man, he has to know that somebody is always out there coming after him, he has to have that hope.

Lieutenant Colonel Horace Reisner,
Joint Personnel Rescue Center Commander,
Briefing to General William C. Westmoreland

GENERAL

Air Force rescue forces will receive notification of isolated personnel via the theater or joint task force command and control structure. A rescue could involve an aircrew bailout over hostile territory, crash landing, ditching at sea, foundering naval vessels, or ground forces cut off from friendly lines. A typical rescue might include:

- ★ Awareness and notification.
- ★ Assessing the situation.
- ★ Selecting the appropriate recovery force.
- ★ Planning the mission.
- ★ Launching the recovery vehicles.
- ★ Refueling at a forward operating location or air refueling prior to ingress.
- ★ Locating the isolated personnel.
- ★ Authenticating the isolated personnel.
- ★ Ingressing enemy territory.
- ★ Recovering the isolated personnel.
- ★ Egressing enemy territory.
- ★ Refueling, as required.
- ★ Recovering at a suitable friendly base.



Figure 4.1. General Stages of CSAR

NOTIFICATION

Threat conditions permitting, **isolated personnel should attempt to establish radio contact** with a wingman, escort aircraft, AWACS, ABCCC, or any other aircraft. Notification procedures are outlined in the SPINS portion of the ATO, and geographic combatant commanders publish SOPs for their area of responsibility (AOR). *In a threat environment, transmissions should be as brief as possible* to avoid detection and compromising the location. *In a permissive environment, transmissions should be long enough* to allow for a direction finder plot of the aircraft or personnel position.

INITIAL RESPONSE

Once an actual or potential CSAR situation is observed, the RCC should be immediately notified through established channels, or any means available. *Upon notification, the RCC assumes CSAR mission coordinator responsibilities for missions involving US Air Force isolated personnel.* The RCC will report the incident to the JSRC. If tasked by the JSRC, the RCC will assume CSAR mission coordinator responsibilities for missions involving joint or multinational aircrew members. In concert with the JSRC, the Air Force RCC coordinates the appropriate CSAR forces and assets. The RCC or JSRC will notify responding units through appropriate channels and brief pertinent aspects of the mission. The response time and operations concept will depend on the enemy threat, environmental conditions, available assets, and other factors. *Although rescue forces may launch upon initial notification of a CSAR incident, only the OSC element will normally proceed into increased threat areas until a positive location and identification of the survivor can be made.*

CSAR is among the most time-sensitive of operations. After four hours on the ground, the chance that a survivor in combat will be successfully rescued is historically less than twenty percent. Rescue forces should be prepared to react quickly if a CSAR is required and should be positioned to minimize time en route to the survivor. Subject to threats, this may require the commander to launch recovery vehicles before the entire CSARTF can be assembled to expeditiously recover the survivor.



CSAR operations may occur over land or sea.

THREAT CONSIDERATIONS

CSAR operations are subject to operational risk management (ORM) and threat analysis in the same manner as any other military operations. *Real time intelligence data is a critical element in determining enemy threat levels.* The threat environment defines the enemy's ability to detect and lethally engage rescue forces and should be carefully evaluated by the RCC/JSRC to determine the appropriate mode of recovery to use.

In general, two basic definitions are used to describe the threat present in contested environments:

✧ *Nominal threat risk:* In a nominal threat environment, threats have either been destroyed, suppressed, negated, are widely scattered or are nonexistent. The rescue mission can be performed with minimal additional support from other assets.

✧ *Increased threat risk:* In an increased threat environment, significant threats are active in the objective area. A successful CSAR mission requires extensive mission planning for threat avoidance or degradation of the threat by support assets. These support assets include, but are not limited to, RESCORT, suppression of enemy air defense, CAP, and other strike assets.

EMPLOYMENT CONSIDERATIONS

In nominal threat environments, resources may respond to rescue taskings with a minimum amount of mission planning. However, operations in increased threat environments normally require timely,

Koh Tang Island, during the Mayaguez Incident

Under intense fire, the marines began boarding the chopper, two-by-two. A pair would rise from their position near the trees, fire a few rounds into the jungle, dash to the chopper's ramp, turn and empty their M-16s at the enemy infested underbrush, then toss their rifles into the helicopter and scramble toward the front. One of the first pair of leathernecks aboard, in a hurry to get to the forward part of the cabin, ripped out the intercom system. From that point Captain Backlund, working the controls, had no way of communicating with his pararescuemen and flight mechanics supervising the loading in the rear. SSgt Harry W. Cash, the flight mechanic manning the rear ramp minigun, was blasting the jungle to provide covering fire for the retreating marines. He yelled into his intercom when the last two leathernecks leaped aboard. In the cockpit Backlund heard nothing. He held the precarious hover. Cash and the other crewmen in the rear yelled into their dead headsets for Backlund to pull up and away. Up front Captain Backlund wondered what was taking so long as he listened to enemy bullets pelting his chopper. Sergeant Cash saw black clad figures emerging from the jungle and swung his minigun to chop them down. One of the figures drew back to toss a grenade. As his arm started forward Cash's stream of fire sliced him in two. The grenade rolled toward the helicopter and exploded. With that Backlund decided that loaded or not it was time to go. Jolly Green 11 moved forward a few yards and then climbed.

Earl H. Tilford, Jr.

Search and Rescue in Southeast Asia

accurate intelligence, and more extensive mission planning. The time required to conduct premission planning can be significantly reduced for CSAR alert crews when real time intelligence data is available and continuously updated through theater information systems. High density threat environments (i.e., integrated air defense systems) require significant degradation of the threat and will require intensive planning and force packaging by CSAR forces to ensure successful combat rescue operations. CSARTF packages require closely coordinated planning to integrate their effort. The JFC can direct precautionary CSAR coverage (within a limited geographic area) in advance of a major operation. To facilitate recovery, combat aircrews should be knowledgeable of the rescue process, to include EPA preparation, identified SAFEs, and proper evasion tactics and techniques.

MISSION PLANNING

Threat avoidance requires thorough mission planning interfaced with real time threat information and precise C2 coordination. *The Air Force mission support system may be used to optimize planning effectiveness, however, all available information tools should be used to assure the best possible understanding of the situation.* The specific information necessary for premission planning and launch decision-making includes threat, weather, terrain, the objective, codes and authentication, safe passage corridors, and air refueling points. Direct communication with the AOC, the JSRC, multinational RCCs, and wing operations centers is essential. This direct communication is even more critical if augmentation of additional air resources such as formation of a CSARTF is warranted. *The Air Force should consider the capabilities of the host nation, other Services, functional components, and multinational forces during all phases of CSAR mission planning.*

MISSION EXECUTION

As information of a potential CSAR mission becomes available it should be disseminated to units that may participate in the rescue mission. Once available information is assessed and mission execution appears feasible, units will be tasked to preplan or launch from alert with supporting forces to execute a recovery operation. Tasked units, whether from alert status or preplanned status, will be given all available information for a successful recovery.

Alert

Alert launch or immediate response missions commencing from airborne orbit are conducted by on-call forces on a short-notice basis. Helicopter forces may be located at a forward location to decrease flight time to the anticipated recovery area and reduce air refueling requirements. The primary alert response is a ground alert for both CSAR helicopters and the HC-130; however, airborne alert orbits may be used. CSARTF coordination may be worked while airborne through the AMC if support assets are available. CSARTF operations are characterized by tailoring support packages to meet specific CSAR mission requirements based on the threat and other factors unique to the rescue area. The use of fighter, attack, and electronic warfare assets significantly enhances the chance of mission success by protecting rescue assets and suppressing enemy air defense systems.

Deliberate

Deliberately planned missions are initiated to recover a predetermined objective, using carefully planned routes to avoid or degrade known or suspected threats. An immediate response may not be possible due to the inability of available forces to counter known threats, requirements to prosecute the mission under the cover of darkness, or other considerations. Covert operations and tactical deception techniques may also be used to advantage on specific missions. This recovery method requires knowledge of the exact location of the isolated personnel. Depending on the threat, rescue forces may penetrate hostile or denied territory with minimal direct support, using terrain masking darkness, or adverse weather as cover.

LOCATING ISOLATED PERSONNEL

Regardless of the threat level, **friendly forces should locate and authenticate isolated personnel before committing CSAR forces to operating environments that present increased risk.** Several methods exist to determine location such as theater electronic surveillance, reconnaissance, C2 aircraft, global satellites, wingman reports, and battlefield radar control posts and centers. Recovery vehicles, fixed-wing CSAR assets, and RESCORT aircraft equipped with personnel locator systems can also pinpoint the isolated personnel's position when isolated personnel are equipped with specialized communications devices.

Absolutely the most beautiful thing I've ever seen was that big helicopter hovering over me.

**Thud pilot MARLIN 01,
speaking of his rescue nearly 30 years earlier**

SEARCH OPERATIONS

The concept of **“combat search” associated with Air Force CSAR should be considered extremely limited in scope.** In most cases, the search will be primarily electronic. *The vulnerability of rescue resources in a threat environment precludes extended aerial search operations in all but a permissive environment.* Air Force rescue efforts will be primarily dedicated to recovering isolated personnel from previously identified geographic positions.



Searching for a survivor from a helicopter is tough. Knowing where to look is critical to success.

AUTHENTICATION

During combat operations, successful **recovery of isolated personnel depends on early authentication**. Isolated personnel will normally not be recovered until their identity has been positively confirmed. *An effective authentication system is essential to protect CSAR forces from enemy entrapment; therefore, authentication data must be strictly controlled and used in a manner that maintains security and viability. CSAR assets are extremely vulnerable during the execution phase and need exact and reliable authentication information.* Extreme care should be taken by the isolated personnel and the rescue forces to ensure authentication information is never compromised. The information should be used in a manner that allows CSAR forces to continue to authenticate isolated personnel over extended periods. There are a number of means to authenticate isolated personnel in hostile environments, including ISOPREP data, ATO code words, letters, numbers, and visual signals. *ISOPREP is the most common means of authentication. It should be readily available to the rescue forces on scene.* Authentication procedures are detailed in JP 3-50.21. Theater or AOR procedures should be published in appropriate directives, OPLANs, and/or SPINS.

SUPPORT TO ISOLATED PERSONNEL

When situations dictate, PJs or equipment may be deployed to the isolated personnel's location in advance of the arrival of a recovery vehicle. If the enemy possesses a highly capable integrated air defense system (IADS), PJs may be inserted in a less heavily defended area, ingress overland, contact and transport the survivor to a suitable extraction site. Once on scene, the PJs will stabilize and/or protect the isolated personnel, transport them as required, and prepare them for recovery. Factors requiring evaluation when considering this option include threats to the isolated personnel and the rescue forces, the nature of isolated personnel injuries, potential timesavings, the recovery plan for PJs and isolated personnel, and the survivor protection/evasion assistance given.

OPERATIONAL RISK MANAGEMENT (ORM)

Combat rescue is inherently risky. *Although risk can never be fully eliminated, it can be effectively managed and limited through a combination of planning, troubleshooting, and application of common sense.* The formal operational risk management process includes: identifying the hazards; assessing the risks and benefits (and looking at things that will reduce the risk); develop controls; make risk decisions; implement controls; and supervise and review.

Theater, joint force, component or Service, and individual unit commanders set the tone for CSAR operations. **CSAR operations should be planned during initial and follow-on phases of all military operations where hostile actions might occur.** Additionally, successful CSAR operations require detailed threat analysis, cost-benefit considerations, and prioritization in the same manner as other military operations. The enemy may use unrecovered personnel as leverage to influence outcomes within an operation or campaign. CSAR operations should not:

- ✧ Unduly risk isolating additional personnel,
- ✧ Routinely expose unique, high value assets to extreme risk, or
- ✧ Allow the overall military situation to deteriorate.

Commanders at all levels should weigh the possibility of recovering isolated personnel and the psychological impact of those aware of the efforts (benefit) against the potential loss of additional resources and the impact of possibly diverting resources from ongoing combat operations (cost), before authorizing a CSAR effort. Air Force RCCs should develop standing CSAR risk decision matrices in conjunction with JSRCs, tailored to current threat analyses, to assist planners and commanders in the decision-making effort. Figure 4.2 provides a representative decision flow chart to assist further in this evaluation.

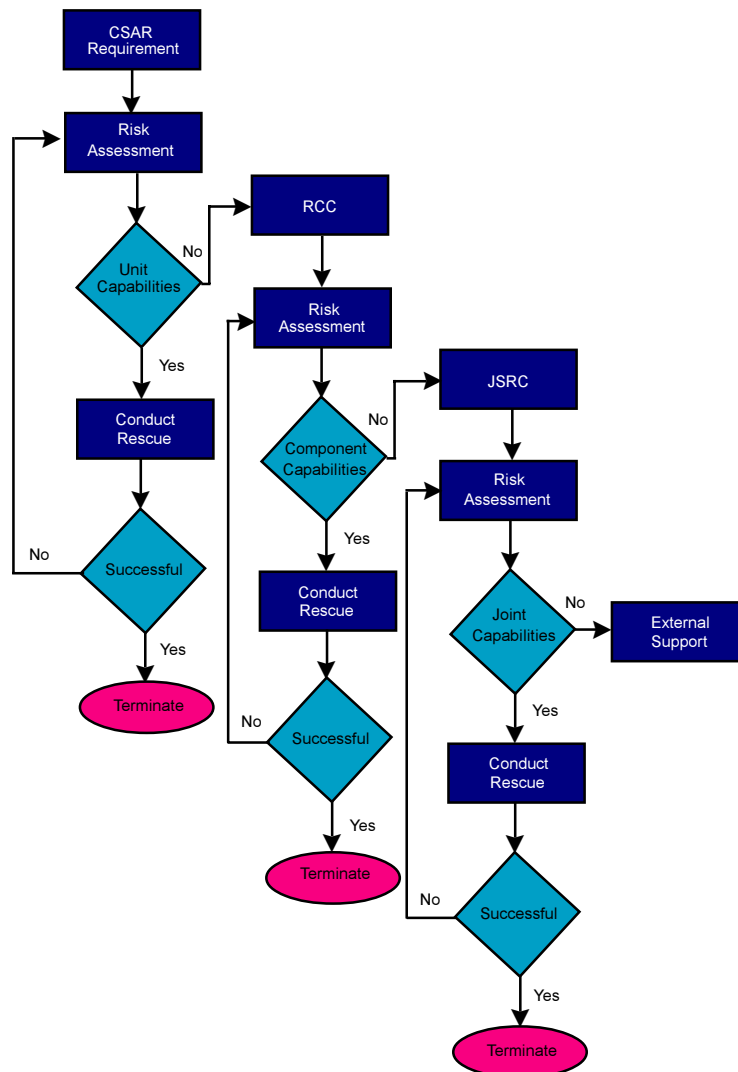


Figure 4.2. Typical CSAR Decision Flow

CHAPTER FIVE

CSAR PLANNING AND SUPPORT CONSIDERATIONS

CSAR operations are subject to cost and benefit considerations and threat analysis in the same manner as any other military operation. The benefit to be gained from a CSAR operation should equal or outweigh the cost (actual or potential) associated with executing the operation.

Joint Pub 3-50.2, *Doctrine for Joint Combat Search and Rescue*

GENERAL

CSAR is among the most time-sensitive of operations. After four hours on the ground, the chance that isolated personnel in combat will be successfully rescued is historically less than twenty percent. Rescue forces should be prepared to react quickly if a CSAR is required, and should be positioned to minimize time en route to the isolated person. *To minimize their response time, Air Force CSAR forces depend on the most modern technology.* Forces should be equipped with state-of-the-art weapons; command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) systems; space-based navigation aids; and personnel locator systems to ensure an effective CSAR force able to act within tight time constraints.

MOBILITY CONSIDERATIONS

Early identification of CSAR requirements and inclusion in the force enhancement/flexible deterrent option (FE/FDO) and/or time-phased force and deployment data (TPFDD) are keys to sustaining support. During crisis action and deliberate planning, Air Force CSAR planners should ensure CSAR unit type codes (UTCs) and other logistics considerations are included in the OPLAN or operation order (OPORD), FE/FDO and/or TPFDD as applicable. This will ensure adequate preliminary crisis action and sustainment planning is done by the theater or joint force logistics staff and flowed by the Joint Operation Planning and Execution System to meet operational requirements and priorities.

Deployment Characteristics

Air Force **CSAR forces should have the ability to execute time-sensitive deployments and to deploy as deliberately planned elements of an Aerospace Expeditionary Task Force.** Deploying forces should be able to respond and function in an environment with the strictest operations security (OPSEC) considerations. *Dedicated rescue forces are mobile, flexible, responsive, and can deploy with organic maintenance and logistic support with minimal notification when adequately supported by Mobility Readiness Spares Packages.* Rotary-wing aircraft may self-deploy for distances less than 1,200 nautical miles (may require refueling) but should be airlifted for greater distances. Fixed-wing aircraft self-deploy configured for combat. Maintenance and support personnel and associated equipment require airlift support or surface transportation.

Air Force Rescue Coordination Center Mobility Requirements

Since most CSAR operations involve operating from deployed locations, Air Force planners should determine the most effective way to tailor a mobility package to provide the needed personnel to conduct RCC or JSRC operations. An Air Force AOC conducting combat operations should include SAR mission controllers and duty officers, communications support personnel, and associated communications and

computer equipment to support the RCC. The RCC should be capable of providing 24-hour CSAR operations and, in many cases, will form the nucleus of the theater joint force commander's JSRC.

INFORMATION CONSIDERATIONS

Successful CSAR operations depend upon a smooth flow of information. Effective information operations, both offensive and defensive, also play an important role.

Communications

Rapid, reliable, and secure communication is one of the critical elements, perhaps the most critical element, of a CSAR operation. *All CSAR forces, including the isolated person, should be able to communicate over long distances, with a minimum of interference or intrusion, and with low probability of detection or intercept.* JSRCs and RCCs should have access to dedicated communication systems when integrated within the JAOC or AOC. Communication systems should provide redundant capabilities for secure intertheater and intratheater data and voice transmission. Knowledge of the enemy's communication equipment and procedures could facilitate effective use of the communication spectrum. All personnel should employ communications deception countermeasures to degrade a potential intruder's effectiveness. *The keys to optimum use of communications are planning, coordination, and brevity.* Brevity words and terminology can be found in Air Force Tactics, Techniques, and Procedures (AFTTP) 3-1, Volume 1; theater directives; and tasking orders. Communication planning requires integrating theater, component, and unit operating instructions and execution checklists. Successful contact procedures require thoroughly developed and coordinated planning, established contact procedures, and timely execution. *The importance of good communications between isolated personnel and rescue forces cannot be overstressed.* Communications-out procedures, or procedures for handling situations when communications are disrupted or personnel/units are unexpectedly out of contact, are often warranted but should be commensurate with the enemy's signal intelligence capability. The CSAR plan should provide alternate means of communications and actions to be taken in case of equipment or communications failure during any phase of mission execution.

Intelligence

Successful CSAR operations require timely and accurate intelligence support. Since the Air Force rescue mission is worldwide, **the intelligence support function should be an integral part of RCCs and rescue units.** *Intelligence specialists should be assigned to, and deploy with, RCCs and operational rescue units* and arrangements should be made for theater intelligence support. The threat level en route to and at the objective area determines the appropriate CSAR response, including tactics, personnel, force composition, and support. Intelligence personnel should continuously update known and suspected enemy ground, air, and sea threats to CSAR forces. In addition, they should be familiar with the target area's geography and the local population's social and political climate. *Rescue missions place unique requirements on mission planning and require intelligence personnel knowledgeable in rescue operations (especially in the low-altitude regime) to include RCC and JSRC operations, CSAR SPINS, and national systems and capabilities that can assist CSAR.* Since threats change rapidly, intelligence personnel should have access to near-real-time intelligence from MAJCOM, theater, or national sources and should be able to immediately relay situational updates to inflight crews. Routine time-consuming intelligence functions should be automated and mission planning systems should interface with intelligence databases. These include, but are not limited to, threat analysis, targeting, collection management, and order-of-battle data.

CITATION TO ACCOMPANY THE AWARD OF
THE SILVER STAR
TO
JAMES L. CARDOSO

Captain James L. Cardoso distinguished himself by gallantry in connection with military operations against an armed enemy of the United States near Batajnica, Serbia, on 27 March 1999. On that date, Captain Cardoso, as MH-53M flight lead, commanded and flew the successful combat search and rescue of an American F-117A pilot shot down within 25 miles of Belgrade. He fearlessly led his formation at great personal risk to himself and his crews by penetrating an extremely formidable air defense system, which had full knowledge that the rescue attempt was being made, and avoided numerous Serbian ground troops actively trying to locate and destroy his three helicopters. With his terrain-following radar turned off to prevent enemy detection, Captain Cardoso flew at 100 feet above the ground avoiding wires and towers with merely one half-mile visibility. At one crucial point, it was only his quick reaction and precise aircraft control that prevented collision with a nearly invisible set of power lines, saving the flight and the mission. His skillful combat use of the new Interactive Defensive Avionics System was an Air Force first and allowed him to completely evade enemy forces, greatly enhancing their survivability throughout the 5.5 hour mission. Captain Cardoso's heroic actions saved an American pilot from enemy capture at a critically sensitive time early in the air campaign. This preserved public support for our national policy and bolstered the coalition by denying the enemy a key source of exploitation. By his gallantry and devotion to duty, Captain Cardoso has reflected great credit upon himself and the United States Air Force.

Security

Information and operations security are critical to CSAR. Security of information is vital to CSAR forces from initial planning stages through execution and mission termination. OPSEC denies the enemy information about friendly capabilities and intentions, including advance notice of mission unique training, joint preparations, deployment, and employment. OPSEC should be carefully considered throughout the CSAR planning and execution phases by identifying, controlling, and protecting indicators and actions associated with the operation. Failure to implement an effective OPSEC program could result in mission compromise and loss of personnel and resources.

Military Deception

Expect adversary opposition and deception efforts. If isolated personnel have not been captured, an enemy may move additional air defense assets into the area in an attempt to down rescue aircraft. Also, deceiving friendly forces into believing isolated personnel have already been captured may slow rescue efforts and give an enemy more time to actually make the capture. If isolated personnel have been captured, deception efforts may be used to lure rescue forces into an area of increased threat.

Numerous agencies, including the National Air Intelligence Center, have released documents on deception operations employed during Kosovo and earlier conflicts. A review of these documents will greatly increase the JSRC's situational awareness.

Geospatial Information and Services

Air Force CSAR forces require timely, accurate, and current geospatial information and services (GI&S) during all phases of CSAR operations; from initial planning through deployment and execution. CSAR forces should work closely with integrated intelligence support to determine the most appropriate GI&S products necessary to complete the mission, and forward requirements through established intelligence channels to geospatial information and services suppliers. GI&S production requirements must be requested/coordinated with the Command GI&S Officer via

secure e-mail or phone. To request existing products on short notice (crisis), the units must make their request to the theater Defense Logistics Agency map depot. This can also be accomplished via e-mail, fax, and/or phone.

Climate and Weather

Air Force CSAR forces require timely and accurate weather support during all phases of planning, deployment, employment, and redeployment.

This allows CSAR forces to use weather conditions to their advantage. Temperature, barometric pressure, precipitation, humidity, ground and low-level flight visibility, predicted winds, fog, cloud cover, radio frequency propagation, sensor detection ranges, and other hazards to recovery forces and the isolated personnel greatly impact CSAR planning and execution. Normally, the AMC monitors and tracks weather; however, this is a shared responsibility of all elements participating in a CSAR operation. The AMC or other assets can conserve valuable combat resources by advising the RCC or JSRC of adverse weather conditions.



Air Force CSAR forces train with night vision goggles, and can use the night to their advantage.

Astronomical Conditions

Astronomical conditions, including sunrise, sunset, moonrise, moon phase, predicted ambient light, and hydrographic data affect CSAR operations much the same as weather data. **Astronomical conditions play an important role in the timing and tempo of CSAR operations and should be considered critical planning factors for CSAR operations.**

OPERATIONAL CONSIDERATIONS

CSAR is integral to combat operations and should be considered across the full range of military operations. Therefore, CSAR planning should be conducted on a routine basis by established RCCs/JSRCs, in conjunction with development of OPLANs and OPORDs. **The dynamic nature of CSAR operations and the need for flexibility dictates careful integration into the air campaign and clear delineation in the ATO.** CSAR operations should be coordinated throughout the JAOC and with other component liaisons, to include the battlefield coordination detachment, the naval and amphibious liaison element, and the special operations liaison element. Air Force personnel conducting or supporting CSAR operations should be thoroughly familiar with the rules of engagement. This is especially critical when CSAR operations occur during MOOTW. During these operations, organizational structures and responsibilities may not be as clearly defined as during war, thereby increasing the potential for confusion.

Commanders preserve CSAR capabilities and minimize risk to specialized personnel, equipment, and material by ensuring that appropriate operational risk management processes are integrated throughout all phases of an operation. Potential hazards should be identified, prioritized, and mitigation options assessed so that informed risk decisions can be made at the appropriate level. Mitigation actions should be carefully balanced to eliminate unnecessary risk in a mission supportive manner. Safety staffs should be included in risk management planning and assessments, particularly when there are potential safety hazards associated with employing weapon systems.

CHAPTER SIX

TRAINING AND EDUCATION

War is not an affair of chance. A great deal of knowledge, study, and meditation is necessary to conduct it well.

Frederick the Great

GENERAL

The success of CSAR operations is dependent upon comprehensive education and rigorous training at all levels. In the unit and at specialized schools, education teaches concepts and communicates information upon which decisions will be based. Training, whether unit training or large joint force exercises, provides the skills necessary to master the complicated tasks that make up the CSAR mission.

COMMANDERS

The following points are crucial:

- ✧ *Commanders should take an active role in evaluating local training programs to ensure aircrew training and proficiency levels meet combat readiness requirements.* They should also ensure that unit CSAR training programs support joint CSAR interoperability concepts, are integrated with other forces, and that training and exercise programs are realistic and effective.
- ✧ Flight discipline, crew coordination, mission planning, and mutual support of participating CSAR forces are essential to effective Air Force combat rescue force employment. The JP 3-50 series, this document, and applicable related Service and AFTTP instructions provide a background for developing these fundamentals. *Commanders should ensure CSAR aircrews, planners, and support personnel are thoroughly familiar with the principles outlined in these documents and can apply them at the operational and tactical level.*

AIRCREWS

Air Force aircrew members can effectively assist rescue forces only if they are familiar with CSAR tactics, techniques, and procedures, and personal survival techniques. All rescue crewmembers should receive combat survival training and threat systems capabilities and limitations training on a recurring basis. CAF aircrews are trained to respond to CSAR as their aircraft capabilities permit and a limited number of fighter/attack aircraft pilots receive RESCORT training. All Air Force crewmembers receive water survival and SERE training. High-risk-of-capture personnel must complete a Level C SERE school and receive periodic refresher SERE training in accordance with DOD Directive 1300.7, *Training and Education Measures Necessary to Support the Code of Conduct*, and JP 3-50.3, *Joint Doctrine for Evasion and Recovery*.

ISOLATED PERSONNEL

Total Air Force CSAR capability is equally dependent on evaders who are well trained and equipped. Evaders should be trained to thoroughly understand the following: evasion and escape

OPERATION ALLIED FORCE

In the skies over Serbia and Kosovo, allied airmen came under hostile fire. Two aircraft were downed, and two airmen—HAMMER 34 and VEGA 31—found themselves on the ground, alone and in enemy territory. Their successful rescues reinforce a key lesson of the past: an evader's training and mental preparation are critical.

As in conflicts past, the actions of these two evaders were an integral part of their successful rescues. HAMMER 34's situational awareness helped his recovery to succeed. HAMMER 34 had the right mental attitude, knew how to use his equipment, and had confidence in himself, his flight, and the recovery effort. This was also true of VEGA 31, whose mission preparation likely meant the difference between freedom and captivity. VEGA 31's knowledge of his ISOPREP and theater evasion procedures greatly aided his authentication and recovery. VEGA 31 later said, "Our SERE training provides a tremendous impact, if it's paid attention to." Plainly, these two survivors paid attention.

techniques; camouflage and concealment methods; capabilities and limitations of personal communication and global positioning system (GPS) equipment. Additionally, evaders should understand theater search and rescue procedures to maximize assistance to CSAR forces.

RESCUE COORDINATION CENTER CONTROLLERS

RCC controllers are the focal point for coordinating CSAR assets and supporting forces. All RCC controllers should complete a locally developed, CSAR-oriented, mission management course in addition to the Joint Combat Search and Rescue Coordinators Course and the Personnel Recovery Plans and Operations Course. Other training oriented towards search and rescue, including the Inland SAR and Maritime SAR courses taught by the Coast Guard, is also desirable. Additionally, personnel who may command and control CSAR operations should consider attending appropriate US Air Force battle management courses and the Air Force Joint Doctrine Air Campaign Course. These courses teach development of air campaign plans, including integration of CSAR operations.

EXERCISES

To ensure interoperability and a smooth transition to combat, Air Force CSAR staffs and forces should exercise regularly with augmentation personnel and forces. Commanders at all levels should participate in these exercises to familiarize themselves with the complexities and details of CSAR doctrine and operations. *The focus should be on exercising the system as a whole, including the JFACC and the AOC, the RCC, elements of the CSARTE, AMC, OSC, and the isolated personnel.* The top priorities are Joint Chiefs of Staff field training exercises (FTX) and CAF FLAG exercises allowing for joint operations and employment of the air component RCC and all components of a typical CSARTE. The second priority is to participate in command post exercises allowing for RCC employment and emphasizing command, control, communications, and intelligence coordination procedures. These exercises provide invaluable experience for RCC controllers, which is normally not available during FTX participation. The CAF exercises include both active duty and air reserve component forces.

Additionally, search and rescue forces from foreign militaries often possess unique expertise and experience in the particular area in which they routinely operate. Combined training with these forces can improve US Air Force CSAR capabilities.

At the Very Heart of Warfare lies Doctrine...

Suggested Readings

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Glossary

Abbreviations and Acronyms

AAF	Army Air Force
ABCCC	airborne battlefield command and control center
ACC	Air Combat Command
AFDD	Air Force Doctrine Document
AFRC	Air Force Reserve Command
AFSOF	Air Force special operations forces
AFTTP	Air Force Tactics, Techniques, and Procedures
AMC	airborne mission commander
ANG	Air National Guard
AOC	aerospace operations center
AOR	area of responsibility
ARRS	Aerospace Rescue and Recovery Service
ARS	Air Rescue Service
ATO	air tasking order
AWACS	Airborne Warning and Control System
C2	command and control
C4ISR	command, control, communications, computers, intelligence, surveillance, and reconnaissance
CAF	Combat Air Forces
CAP	combat air patrol
CAS	close air support
CINC	commander in chief
COMACC	Commander, Air Combat Command
COMAFFOR	Commander, Air Force Forces
COMJSOTF	commander, joint special operations task force
CSAR	combat search and rescue
CSARTF	combat search and rescue task force
DMZ	demilitarized zone
EPA	evasion plan of action
EWO	electronic warfare officer
FAC	forward air controller
FAC(A)	forward air controller (airborne)
FE/FDO	force enhancement/flexible deterrent option
FTX	field training exercise
GI&S	geospatial information and services
GPS	global positioning system

IADS	integrated air defense system
ISOPREP	isolated personnel report
ISR	intelligence, surveillance, and reconnaissance
JAOC	joint air operations center
JFACC	joint force air component commander
JFC	joint force commander
JFSOCC	joint force special operations component commander
JP	joint publication
JSOTF	joint special operations task force
JSTARS	joint surveillance, target attack radar system
JSRC	joint search and rescue center
JTF	joint task force
JTTP	joint tactics, techniques, and procedures
MAC	Military Airlift Command
MAJCOM	major command
MOOTW	military operations other than war
NAF	numbered air force
OPCON	operational control
OPLAN	operation plan
OPORD	operation order
OPSEC	operations security
ORM	operational risk management
OSC	on-scene commander
PJ	individual pararescue specialist
PR	personnel recovery
pub	publication
RCC	rescue coordination center
RESCAP	rescue combat air patrol
RESCORT	rescue escort
SAFE	selected area for evasion
SAM	surface-to-air missile
SANDY	call sign of a specially trained and dedicated rescue escort
SAR	search and rescue
SARDO	search and rescue duty officer
SecDef	Secretary of Defense
SERE	survival, evasion, resistance, and escape
SOP	standing operating procedure
SPINS	special instructions
STT	special tactics team

TACON	tactical control
TPFDD	time-phased force and deployment data
US	United States
USAF	United States Air Force
UTC	unit type code

Definitions

airborne mission commander. The commander serves as an airborne extension of the executing component's rescue coordination center (RCC) and coordinates the combat search and rescue (CSAR) effort between the combat search and rescue task force (CSARTF) and the RCC (or joint search and rescue center) by monitoring the status of all CSARTF elements, requesting additional assets when needed, and ensuring the recovery and supporting forces arrive at their designated areas to accomplish the CSAR mission. The airborne mission commander (AMC) may be designated by the component RCC or higher authority. The AMC appoints, as necessary, an on-scene commander. Also called **AMC**. (JP 1-02)

combat search and rescue. A specific task performed by rescue forces to effect the recovery of distressed personnel during war or military operations other than war. Also called **CSAR**. (JP 1-02)
See also **personnel recovery**.

combat search and rescue mission coordinator. The designated person or organization selected to direct and coordinate support for a specific combat search and rescue mission. Also called **CSAR mission coordinator**. (JP 1-02)

evasion and escape. The procedures and operations whereby military personnel and other selected individuals are enabled to emerge from an enemy-held or hostile area to areas under friendly control. (JP 1-02)

evasion and recovery. The full spectrum of coordinated actions carried out by evaders, recovery forces, and operational recovery planners to effect the successful return of personnel isolated in hostile territory to friendly control. Also called **E&R**. (JP 1-02)

isolated personnel. Military or civilian personnel that have become separated from their unit or organization in an environment requiring them to survive, evade, or escape while awaiting rescue or recovery. (JP 1-02)

isolated personnel report. A DOD Form (DD 1833) which contains information designed to facilitate the identification and authentication of an evader by a recovery force. Also called **ISOPREP**. (JP 1-02)

joint force air component commander. The joint force air component commander derives authority from the joint force commander who has the authority to exercise operational control, assign missions, direct coordination among subordinate commanders, redirect and organize forces to ensure unity of effort in the accomplishment of the overall mission. The joint force commander will normally designate a joint force air component commander. The joint force air component commander's responsibilities will be assigned by the joint force commander (normally these would include, but not be limited to, planning, coordination, allocation, and tasking based on the joint force commander's apportionment decision). Using the joint force commander's guidance and authority, and in coordination with other Service component

commanders and other assigned or supporting commanders, the joint force air component commander will recommend to the joint force commander apportionment of air sorties to various missions or geographic areas. Also called **JFACC**. (JP 1-02)

joint search and rescue center. A primary search and rescue facility suitably staffed by supervisory personnel and equipped for planning, coordinating, and executing joint search and rescue and combat search and rescue operations within the geographical area assigned to the joint force. The facility is operated jointly by personnel from two or more Service or functional components or it may have a multinational staff of personnel from two or more allied or coalition nations (multinational search and rescue center). The joint search and rescue center should be staffed equitably by trained personnel drawn from each joint force component, including US Coast Guard participation where practical. Also called **JSRC**. (JP 1-02)

military deception. Actions executed to deliberately mislead adversary military decision makers as to friendly military capabilities, intentions, and operations, thereby causing the adversary to take specific actions (or inactions) that will contribute to the accomplishment of the friendly mission. The five categories of military deception are: **a. strategic military deception**—Military deception planned and executed by and in support of senior military commanders to result in adversary military policies and actions that support the originator's strategic military objectives, policies, and operations. **b. operational military deception**—Military deception planned and executed by and in support of operational-level commanders to result in adversary actions that are favorable to the originator's objectives and operations. Operational military deception is planned and conducted in a theater of war to support campaigns and major operations. **c. tactical military deception**—Military deception planned and executed by and in support of tactical commanders to result in adversary actions that are favorable to the originator's objectives and operations. Tactical military deception is planned and conducted to support battles and engagements. **d. Service military deception**—Military deception planned and executed by the Services that pertain to Service support to joint operations. Service military deception is designed to protect and enhance the combat capabilities of Service forces and systems. **e. military deception in support of operations security (OPSEC)**—Military deception planned and executed by and in support of all levels of command to support the prevention of the inadvertent compromise of sensitive or classified activities, capabilities, or intentions. Deceptive OPSEC measures are designed to distract foreign intelligence away from, or provide cover for, military operations and activities. (JP 1-02)

on-scene commander. The person designated to coordinate the rescue efforts at the rescue site. Also called **OSC**. (JP 1-02)

operational control. Transferable command authority that may be exercised by commanders at any echelon at or below the level of combatant command. Operational control is inherent in combatant command (command authority). Operational control may be delegated and is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. Operational control should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Operational control normally provides full authority to organize commands and forces and to employ those forces as the commander in operational control considers necessary to accomplish assigned missions. Operational control does not, in and of itself, include authoritative direction for logistics or

matters of administration, discipline, internal organization, or unit training. Also called **OPCON**. (JP 1-02)

pararescue team. Specially trained personnel qualified to penetrate to the site of an incident by land or parachute, render medical aid, accomplish survival methods, and rescue survivors. (JP 1-02)

personnel recovery. The aggregation of military, civil, and political efforts to obtain the release or recovery of personnel from uncertain or hostile environments and denied areas whether they are captured, missing, or isolated. That includes US, allied, coalition, friendly military, or paramilitary, and others as designated by the National Command Authorities. Personnel recovery (PR) is the umbrella term for operations that are focused on the task of recovering captured, missing, or isolated personnel from harm's way. PR includes, but is not limited to, theater search and rescue; combat search and rescue; search and rescue; survival, evasion, resistance, and escape; evasion and escape; and the coordination of negotiated as well as forcible recovery options. PR can occur through military action, action by nongovernmental organizations, other US Government-approved action, and/or diplomatic initiatives, or through any of these. Also called **PR**. (JP 1-02)

rescue coordination center. A primary search and rescue facility suitably staffed by supervisory personnel and equipped for coordinating and controlling search and rescue and/or combat search and rescue operations. The facility is operated unilaterally by personnel of a single Service or component. For Navy component operations, this facility may be called a rescue coordination team. Also called **RCC** (or **RCT** for Navy component). (JP 1-02)

special tactics team. An Air Force team composed primarily of special operations combat control and pararescue personnel. The team supports joint special operations by selecting, surveying, and establishing assault zones; providing assault zone terminal guidance and air traffic control; conducting direct action missions; providing medical care and evacuation; and, coordinating, planning, and conducting air, ground, and naval fire support operations. (JP 3-05)

tactical control. Command authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed and, usually, local direction and control of movements or maneuvers necessary to accomplish missions or tasks assigned. Tactical control is inherent in operational control. Tactical control may be delegated to, and exercised at any level at or below the level of combatant command. Also called **TACON**. (JP 1-02)

